

## CLAIMS

1. A circuit substrate production method in which a substrate produced by a substrate manufacturer (1) is delivered to a subsequent mounting manufacturer (2) for mounting a component at the mounting manufacturer to thereby produce a circuit substrate, wherein:

a multi-piece substrate (5) is employed which is to be separated into a plurality of pieces at one or each of a plurality of separation levels; and the substrate manufacturer records identification information formed of information related to the entire substrate and information representing relative relationship about the separation at each of the separation levels on each of information recording portions (8, 9, 10) each of which is provided so as to correspond to each substrate (5, 6, 7) before separation and after separation at each separation level, and delivers the substrate to the mounting manufacturer.

2. The circuit substrate production method according to claim 1, wherein information is recorded as a two-dimensional code on the information recording portions (8, 9, 10).

3. The circuit substrate production method according to claim 1 or 2, wherein, in addition to the identification information of each of the substrates (5, 6, 7) themselves, information related to a production step at the substrate

manufacturer and information related to a production step at the mounting manufacturer (2) are recorded on the information recording portions (8, 9, 10) at the substrate manufacturer (1).

5           4. A circuit substrate production method in which, at a mounting manufacturer (2), a component is mounted on a substrate which is produced by a substrate manufacturer (1) and is delivered to the subsequent mounting manufacturer to thereby produce a circuit substrate, wherein:

10           a multi-piece substrate (5) is employed which is to be separated into a plurality of pieces at one or each of a plurality of separation levels; at the mounting manufacturer, identification information employed in the mounting manufacturer is recorded on each of information recording  
15           portions on the substrate in which, at the substrate manufacturer, identification information formed of information related to the entire substrate and information representing relative relationship about the separation at each of the separation levels has been recorded on each of the information  
20           recording portions (8, 9, 10) each of which is provided so as to correspond to each substrate (5, 6, 7) before separation and after separation at each separation level.

          5. The circuit substrate production method according to claim 4, wherein, at the mounting manufacturer, mounting is  
25           performed on the substrate, which has information about a

production step at the mounting manufacturer (2) recorded on the information recording portions (8, 9, 10) at the substrate manufacturer (1) in addition to the identification information about each of the substrates (5, 6, 7) themselves, based on  
5 the information which is read from the information recording portions and is related to the production step.

6. The circuit substrate production method according to claim 1, wherein production step information about each of the substrates (5, 6, 7) and the identification information read  
10 from the information recording portions (8, 9, 10) are combined in the substrate manufacturer (1) and the mounting manufacturer (2), are transmitted to a data processing center (29) connected via a communication network (28), and are data-processed in the data processing center to thereby construct  
15 various databases (30), and wherein the substrate manufacturer and the mounting manufacturer perform required processing by retrieving required data from the databases via the communication network.

7. The circuit substrate production method according to  
20 claim 4, wherein production step information about each of the substrates (5, 6, 7) and the identification information read from the information recording portions (8, 9, 10) are combined in the substrate manufacturer (1) and the mounting manufacturer (2), are transmitted to a data processing center  
25 (29) connected via a communication network (28), and are data-

processed in the data processing center to thereby construct various databases (30), and wherein the substrate manufacturer and the mounting manufacturer perform required processing by retrieving required data from the databases via the  
5 communication network.

8. The circuit substrate production method according to claim 6 or 7, wherein the databases (30) contain information about production histories at both the substrate manufacturer (1) and the mounting manufacturer (2).

10 9. A circuit substrate production system in which a multi-piece substrate (5), which is to be separated into a plurality of pieces at one or each of a plurality of separation levels and has information recording portions (8, 9, 10) each of which is provided so as to correspond to each  
15 substrate (5, 6, 7) before separation and after separation at each separation level, is produced at a substrate manufacturer (1), the substrate produced at the substrate manufacturer being delivered to a subsequent mounting manufacturer (2), and in which an electronic component is mounted on the substrate  
20 in the mounting manufacturer to thereby produce a circuit substrate, wherein:

in the substrate manufacturer, recording means (17) is provided which records, on each of the information recording portions of the substrate, identification information formed  
25 of information related to the entire substrate and information

representing relative relationship about the separation at each of the separation levels; and in the mounting manufacturer, read-out means (21, 25) is provided which reads information from the information recording portions.

5           10. The circuit substrate production system according to claim 9, wherein the recording means (17) in the substrate manufacturer (1) is configured such that, in addition to the identification information of each of the substrates (5, 6, 7) themselves, information about a production step in the  
10 substrate manufacturer and information about a production step in the mounting manufacturer (2) are recorded on the information recording portions (8, 9, 10).

          11. The circuit substrate production system according to claim 9 or 10, comprising a data processing center (29) which  
15 is connected to the substrate manufacturer (1) and the mounting manufacturer (2) via a communication network (28) and processes data transmitted from the substrate manufacturer and the mounting manufacturer to thereby construct various databases (30), wherein read-out means (18, 21, 25) and data  
20 processing-transmitting-receiving means (20, 27) are provided in the substrate manufacturer and the mounting manufacturer, the read-out means reading out the identification information recorded on the information recording portions (8, 9, 10) of each of the substrates (5, 6, 7), the data processing-  
25 transmitting-receiving means combining production step

information about each of the substrates in the substrate manufacturer and the mounting manufacturer and the identification information to transmit to the data processing center and receiving required data from the data processing  
5 center.

12. A multi-piece substrate (5) which has one or a plurality of separation levels and is to be separated into a plurality of pieces at each of the separation levels, wherein:  
information recording portions (8, 9, 10) are provided,  
10 each of which corresponds to each substrate (5, 6, 7) before separation and after separation at each separation level; and identification information formed of information related to the entire substrate and information representing relative relationship about the separation at each of the separation  
15 levels is recorded on each of the information recording portions.

13. The multi-piece substrate according to claim 12, wherein production histories at both the substrate manufacturer (1) and the mounting manufacturer (2) are  
20 recorded on the information recording portions (8, 9, 10).

14. The multi-piece substrate according to claim 12, wherein, in addition to individual information of the substrates (5, 6, 7) themselves, information required in a production step at the substrate manufacturer (1) and  
25 information required in a production step at the mounting

manufacturer (2) are recorded on the information recording portions (8, 9, 10).

15. A circuit substrate which is formed by mounting a component on a substrate (6, 7) formed by separating a multi-  
5 piece substrate (5) into a plurality of pieces at one or each of a plurality of separation levels, wherein:

the circuit substrate has an information recording portion (8, 9, 10); and identification information formed of information common to all the substrates in the multi-piece  
10 substrate and information representing relative relationship between substrates separated at each of the separation levels is recorded on the information recording portion.

16. The circuit substrate according to claim 15, wherein, in addition to the identification information of the substrate  
15 (5, 6, 7) itself, information required in a production step at a substrate manufacturer (1) and information required in a production step at a mounting manufacturer (2) are recorded on the information recording portion (8, 9, 10).

17. A circuit substrate production method wherein a  
20 combination of production step information and identification information is data-processed in a data processing center (29) to thereby construct various databases (30), the production step information being transmitted from a substrate  
manufacturer (1) and a mounting manufacturer (2) via a  
25 communication network (28) and being related to each of

substrates (5, 6, 7) each of which is included in a multi-piece substrate separated into a plurality of pieces at one or each of a plurality of separation levels and serves as a substrate before separation and after separation at each separation level, the identification information being formed of information related to the entire substrate read out from information recording portions (8, 9, 10) provided in each substrate, and information representing relative relationship about the separation at each of the separation levels.

10        18. The circuit substrate production method according to claim 17, wherein information about production histories at both the substrate manufacturer (1) and the mounting manufacturer (2) is contained in the databases (30).

15        19. The circuit substrate production method according to claim 17, wherein information which is retrieved by the substrate manufacturer (1) and the mounting manufacturer (2) via the communication network (28) and is required when required processing is performed is contained in the databases (30).

20        20. A circuit substrate production method in which a substrate produced by a substrate manufacturer (1) is delivered to a subsequent mounting manufacturer (2) for mounting a component at the mounting manufacturer to thereby produce a circuit substrate, wherein,

25        when the substrate manufacturer records identification



information on an information recording portion provided on the substrate and delivers the substrate to the mounting manufacturer, information related to a production step at the substrate manufacturer and information related to a production  
5 step in the mounting manufacturer are recorded, in addition to the identification information of the substrate, on the information recording portion at the substrate manufacturer.

21. A circuit substrate production method in which a substrate produced by a substrate manufacturer (1) is  
10 delivered to a subsequent mounting manufacturer (2) for mounting a component at the mounting manufacturer to thereby produce a circuit substrate, wherein:

when the substrate manufacturer records identification information on an information recording portion provided on  
15 the substrate and delivers the substrate to the mounting manufacturer, production step information about the substrate and the identification information read out from the information recording portion are combined in the substrate manufacturer and the mounting manufacturer, is transmitted to  
20 a data processing center (29) connected via a communication network (28), and is data-processed at the data processing center to thereby construct various databases (30); and the substrate manufacturer and the mounting manufacturer perform required processing by retrieving required data from the  
25 databases via the communication network.

22. A circuit substrate, wherein production histories at  
a substrate manufacturer (1) and a mounting manufacturer (2)  
are recorded on an information recording portion provided to a  
substrate in addition to identification information of the  
5 substrate.